

REMARKS/ARGUMENTS

Applicant responds herein to the Office Action dated September 11, 2006.

Rejection of Claims 1 and 2 under 35 U.S.C. § 103

Claims 1 and 2 are rejected under as being obvious over Chiang (2005/0051100), in view of Arami (5,591,269), Yamaguchi (6,645,304), Inazumachi (6,693,789) and Yamamoto (6,475,924). Reconsideration of this rejection is respectfully requested.

According to an aspect of Applicant's claimed invention, an electrode-built-in susceptor with several nonobvious improvements is provided. Among these improvements are the alleviation of the thermal stress generated among aluminum nitride components, for example, the mounting plate (12), the first intermediate plate (13), a second intermediate plate (14), a supporting plate (15), and the power supplying terminal, because the terminal expansion coefficients of the components are close to each other (see for example, Specification, page 13, lines 6-11, and page 14, line 20 - page 15, line 1). Further, anti-oxidization characteristics are improved by using such a combination of components (see for example, Specification, page 8, line 3 - page 9, line 22).

For at least the following reasons, the recitations of independent claims 1 and 2 are neither anticipated by nor obvious based on the cited art. By way of example, claims 1 and 2 require an electrode-built-in susceptor including a power supplying terminal disposed in the susceptor body, the power supplying terminal being formed by a conductive aluminum-nitride-tantalum-nitride-composite-sintered-member.

The Examiner acknowledges that Chiang, Arami, Yamaguchi and Inazumachi do not disclose or suggest such a feature but alleges that Yamamoto discloses a sintered aluminum nitride substrate, in which tantalum nitride can be used to provide an electrical conductive layer with good adhesion with the aluminum nitride substrates (Office Action, page 6), and alleges that Yamamoto discloses the cited feature of claims 1-2, citing Yamamoto, column 4, lines 15-30.

Yamamoto discloses an electrical conductive pattern formed on both surfaces of a substrate made of a thin metal film, and that "tantalum nitride (Ta-N) can be favorably used since it can be intimately adhered to the aluminum nitride substrate." Yamamoto discloses that an electrically

conductive pattern made of tantalum nitride metal could be formed on an aluminum nitride substrate for obtaining electric conductivity between the conductive pattern and the substrate (Yamamoto, column 4, lines 17-33).

It is respectfully submitted that Yamamoto does not disclose or suggest a power supplying terminal formed by an aluminum-nitride-tantalum-nitride-composite-sintered-member, as *inter alia*, required by claims 1 and 2. That is, Yamamoto is silent with respect to any such application used in a power supplying terminal, let alone a application entailing tantalum-nitride and other metals used as a composite sintered member of a power supplying terminal. Accordingly, the recitations of claims 1 and 2 are not disclosed or suggested by the cited art.

The Examiner alleges that during the sintering process some of the tantalum will be inherently converted to tantalum nitride through reaction with nitride present in the mixture. However, the Examiner has cited no disclosure in the cited art of a power supplying terminal formed by conductive aluminum-nitride-tantalum-nitride-composite-sintered-member.

Moreover, it is respectfully submitted that there would have been no motivation for the proposed combination sufficient for a person of ordinary skill in the art to arrive at claims 1 and 2. The mere fact that references can be combined or modified does not render the result and combination obvious unless the prior art also suggests the desirability of the combination (MPP 2143.01, Section III). The Examiner has cited no sufficient suggestion or motivation contained in the cited art for using tantalum nitride as part of the composite for the power supplying terminal, as required by claims 1 and 2. Accordingly, it is respectfully submitted that it would constitute impermissible hindsight reconstruction based on applicant's own disclosure to make the proposed combination based on the cited references.

In a similar vein, it is respectfully submitted that the proposed modification would render the prior art being modified unsatisfactory for its intended purpose. If the substrate and the electrically conductive pattern of Yamamoto are crushed to produce the composite-sintered-member, the electrically conductive pattern 3 of Yamamoto cannot exist, that is, the subject of Yamamoto cannot have a functional layer. If the proposed modification would render the prior art invention being modified unsatisfactory for its intended purposes, then there is no suggestion or motivation to make the proposed modification (MPP 2143.01, Section V). Accordingly, it is

respectfully submitted even if all the cited features of claims 1 and 2 were individually disclosed, the recitations of claims 1 and 2 would not have been obvious to a person of ordinary skill based on the cited art.

Applicant notes that the application published as U.S. Publication 2004/007406 (Ootsuka), cited in the previous Office Action, was allowed on October 5, 2006, due, at least in part, to the novelty and inventiveness of the aluminum-nitride-tantalum-nitride-composite-sintered-member. Applicant believes that in view of the allowability of Ootsuka et al., the present invention, having the same technical feature, should also be allowed.

Rejection of Claims 1 and 2 under 35 U.S.C. § 103

Claims 1 and 2 are rejected as being obvious based on applicant's admitted prior art, in view of Arami, Inazumachi and Yamamoto. Reconsideration of this rejection is respectfully requested.


As discussed, Yamamoto does not disclose or suggest a power supplying terminal formed by a tantalum-nitride-sintered member or an aluminum-nitride-tantalum-nitride-composite-sintered-member, as *inter alia*, required by claims 1 and 2. Moreover, as discussed in the foregoing discussion, the recitations of claims 1 and 2 would not have been obvious based on the cited art.

Conclusion

In view of the foregoing discussion, withdrawal of the rejections and allowance of the application is respectfully requested. Should the Examiner have any questions regarding the present Amendment or regarding the application generally, the Examiner is invited to telephone the undersigned attorney at the below-provided telephone number.

Respectfully submitted,

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